

The Influences of Work-Life Balance, Personality and Emotional Intelligence on Women Leadership Behaviour among the Malaysian Engineers

Hanim Hamdan^{1*}, Umami Naiemah Saraih¹ and Amena Sibghatullah^{1,2}

¹Faculty of Applied & Human Sciences, Universiti Malaysia Perlis, 01000, Kangar, Perlis, Malaysia.

²Faculty of Management Sciences, KIET, Karachi City, 75190, Sindh, Pakistan.

ABSTRACT

Nowadays, there are now more women on the management team. In the past, only men could participate in certain roles, board meetings, and decision making. However, the number of women in leadership positions remains low, making it difficult for women to advance in the firm. Leadership is very broad concept which various theories and styles exist; where women leadership behaviour just one part of the leadership and can be defined in different ways. Furthermore, the research of women leadership behaviour has a restricted number of sources. Thus, the primary goal of the study is to identify the elements that contribute to women leadership behaviour, specifically the association between Work Life Balance (WLB), Personality, and Emotional Intelligence (EI) toward Women Leadership Behaviour among Malaysian engineers. This study employed a basic random sample strategy to obtain data from 391 Malaysian engineers. The Statistical Package for the Social Sciences (SPSS) version 23, was used to test the data. All hypotheses were accepted as a result of the test. This research is important because it can assist practitioners and organisations prioritise workforce diversity toward women leaders and the capacity to persuade Human Resources Specialists to properly organise a diverse workforce. Furthermore, the number of women leaders may be expanded in the future, and the diversity problem in our society can be improved, allowing Malaysia to meet the SDGs.

Keywords: Emotional Intelligence, Personality, Women Leadership Behaviour, Work Life Balance

1. INTRODUCTION

The number of women working in industry has increased recently, but the number of women leaders has not increased in a long time. It may also be found in empirical studies when there is a lack of research on women leadership behaviour. According to Gipson et al. (2017), just 5% of 165 000 leadership studies are on women. Furthermore, the majority of leadership research compares men and women, with few studies focusing specifically on women leadership behaviour. In 2015, world leaders gathered at the United Nations agreed to accomplish 17 Global Goals for Sustainable Development by 2030. This aim is referred to as the Sustainable Development Goals (SDGs) or Global Goals. There are around 193 countries that engage in this purpose, including Malaysia, which is also a participant of this meeting (United Nations, 2015). Among the 17 SDGs, one is focused on gender equality, with the goal of ending all forms of discrimination against all women and girls everywhere, ensuring women having full and effective participation and equal opportunities for leadership at all levels of decision making in political, economic, and public life, and adopting and strengthening sound policies and enforceable legislation to promote gender equality and the empowerment of all women (United Nations, 2015).

*Corresponding Author: hanimhamdan2296@gmail.com

In the Malaysian context, it also shows in the number of women leaders worldwide which there are increase from year to year. But there is lack of documented or study about women leadership even though they mostly are contributed to the successful of the company (Hamdan & Saraih, 2021). Furthermore, as Fui and Lim (2019) discovered, there was a shortage of women in positions of leadership. According to the findings of this study, women in positions of leadership performed worse than males. Furthermore, according to a United Nations (2020) study, women held 28 percent of all executive jobs in the globe in 2019, a tiny rise from 25 percent in 2005. The proportion of women in managerial positions is decreasing. The proportion of women in managerial roles is falling.

Furthermore, this study may aid in identifying certain characteristics that may raise the amount of women leadership behaviour. As a result, more women were projected to work in Malaysia's engineering profession. As a result, this study may have some important consequences for women leadership behaviour. In the long run, it may be able to learn about the absence of women in male-dominated jobs. The number of women becoming leaders in Malaysia is growing, but only in the last few years (Eagly, 2007). However, there is still a gender disparity in most senior executive positions. Some research has studied the consequences of prejudice toward women leaders and concluded that prejudice does not always result in discriminatory behaviour, but that attitude can limit women ability to be in leadership roles and that discriminatory evaluation actions will occur when women occupy those roles (Eagly, 2007). Aside from the discriminating judgement, another component may be noted. This might lead to unhappiness among women, since they will consider taking on leadership roles despite the fact that compensation disparities exist between men and women.

This might also explain why there are fewer women working in Malaysia than males. According to a Khazanah Research Institute (2018) analysis, women make up half of Malaysia's working-age population but account for just 25% of the labour force. As a result, women have a stronger representation in the majority of occupations, while their participation is lowest in management positions. There are also a few challenges or hindrances for women to be effective leaders, such as income disparities between men and women. This may provide a clearer picture of the drop in the number of women in the labour force, as well as the efficiency of women leadership, given the number of women leaders is low in the male-dominated business (Khazanah, 2018). In sum, this study was done to investigate the determinants of women leadership behaviour among engineers in Malaysia. Following that, few variables were tested in this study, including women leadership behaviour as the dependent variable, WLB, personality and EI as the independent variables.

2. LITERATURE REVIEW

Engineering is one of the occupations in Malaysia where women are significantly underrepresented. According to the Malaysian Statistics Department, women made up around 34% of all employed people in 1999. Even while women have more opportunities to enter the workforce, this does not guarantee that they will be able to advance to top positions as leaders. Only 2.5 percent of all hired women workers are in administrative and managerial jobs, where they are responsible for juniors and supervisory management. For the past 30 years, women contributions to the labour force have been prominent societal trends. Women have also been responsible for the increase in employment during the 1970s. However, there is still a shortage of writing and study regarding Malaysian women in management who have contributed and succeeded in their careers in Malaysia (Abu Bakar, 2012). Women continue to be underrepresented in Asia and the Pacific's sectors, according to UNESCO (2021). However, the difficulties that women have in pursuing professions and succeeding in engineering have been linked to the specific background and climate of each country (Asian Development Bank, 2015).

In Malaysia, women employment was barely 27 percent, whereas male employment was more than 50 percent. As a result, the number of women engineers remained low, as mentioned in the UNESCO study (2021). With women being half of the world's population, no major improvement in any country's living standards could be accomplished unless women were an important and integrated part of the process. It was now widely accepted that the subject of women empowerment was critical. As a result, the issue was presented in every corner of the globe. Because girls were the future moms of any nation, educating them was a major concern for her kids, which had a good ripple effect in society and the country (Baqutayan, 2020).

Women have recently demonstrated more gender equality at home and at work. When women and men shared domestic duties and childrearing roles, gender norms and lifestyles changed. On the social conventions of etiquette and gender roles, there was flexibility and fairness in the married partnership. Women could now arrange their lives both inside and outside the home with greater ease and flexibility. Despite accounting for 46 percent of the workforce, women in the United States have worked outside the home. Nonetheless, women were underrepresented in leadership positions in corporations, higher education institutions, and the political sector (Chin, 2011). Having women in managerial roles had no negative consequences for the firms or organisations. As a result, it grew more beneficial and gave more benefits to businesses. According to research conducted by Erhardt et al. (2003), Krishnan and Park (2005), and Chisholm-Burns et al. (2017), having women on management teams improves financial performance.

WLB was defined as achieving role-related expectations cooped up and shared between an individual and the role-related partners in the work and family (Grzywacz & Carlson, 2007). Several studies on WLB and women leadership behaviour have found a largely positive association between the two. Sidhu and Saluja (2017) conducted a study on the WLB on working women who work as professionals in banks and insurance organisations. Women have moved out of their comfort zone, breaking traditions and norms to become contributing members of society, yet women continue to live in a male-dominated world. Women become bosses at work, but they may also be daughters, wives, and mothers at home, so they must strike a balance in both roles. This creates difficulties and obstacles for women in balancing work and life. Furthermore, WLB and leadership were intimately intertwined, according to Brue (2018); Braun and Peus (2018). Women in leadership were recommended to provide WLB interventions to their employees, emphasising the positive long-term impact these concessions had on worker productivity (Kalysh et al., 2016). As a result, this study looks at the impact of WLB on women leadership behaviour. According to the majority of previous studies, it was because most women need to manage family life and job life. In actual life, women were more likely than males to be affected by a WLB.

Personality was defined as a set of psychological traits and mechanisms in the individual that were organised and relatively enduring and influenced their interactions and adaptations to the intrapsychic, physical, and social environments (Larsen & Buss, 2009). Furthermore, there are a few actual researches that demonstrate the association between personality and women leadership behaviour. Gabdreeva and Khalfieva (2016) conducted a comparative analysis of the structures of personality indicators, which revealed a large number of differences between the structures of personality indicators of career-successful men and women managers who have made a definite conduct of a separate analysis of the samples chosen based on sex. The subject of that paper's research is a personality attribute of women managers. Sun and Shang (2019) also observed a clear correlation between personality and leadership. They discovered that personal qualities such as self-transcendence are related to servant leadership in unexpected ways. In terms of personality, women have traditionally associated it with being firmer and more thorough in all aspects. It also led to the perception that women were

complicated, but it wasn't just a matter of adding information. It was difficult for women, for example, to have the needed personality in male-dominated fields such as engineering.

EI was known as the capability of a person to manage and control their emotions and could control the emotions of others (Chan et al., 2018). There was a lack of studies on EI and women leadership behaviour. Several studies on EI and women leadership behaviour have been discovered, such as Saini (2018), a study that investigated the relationship between EI and leadership where EI offered assistance to employees where emotionally intelligent leadership was a good person who could give support. They also discovered leadership efficacy in supporting behaviour in EI, which might boost performance rather than have a detrimental influence. Li et al. (2016) discovered a relationship between EI and leadership in their study. Leaders who favoured the preceding way with a psychological cushion had higher EI than leaders who preferred the delayed manner. Leaders who are hesitant to offer assistance while under pressure, for example. EI and leadership style may be related. The study supports previous-style leadership, which provided support to staff under pressure, and an emotionally perceptive leader was in a better position. Women and EI were closely intertwined because women were more emotional. However, Ahmed et al. (2019) discovered that women had more emotional control than males. In addition, EI was in the highest position for women, such as the well-being factor, sociability factor, and self-control factor. For men, EI was the second last place where to them was not important. It has been shown in the study by Minárová et al. (2020) that studies about EI of managers in the family business in Slovakia. It also shows that the EI in the first place for women indicates that women could express emotions more clearly, were good at perceiving emotion to others, maintain satisfactory emotional ties with others, and had a high level of empathy. Thus, the impact of EI on women leadership behaviour has been highlighted in this study. As a result, new knowledge on the influence of EI on leadership or leadership effectiveness, as well as the specific effect of EI on women leadership behaviour, would add to the current research.

3. METHODS

The total sample size for this study is 391 engineers in Malaysia, all of whom are women. According to the Institution of Engineers (IEM) annual report for 2020, there were 22,475 engineers enrolled in the IEM (The Institution of Engineers Malaysia, 2020). As a result, the total number of engineers enrolled in IEM was the sum of men and women engineers. According to figures from the Board of Engineers Malaysia (BEM), the overall proportion of women engineers in Malaysia was just 26%. The Stars (2018) As a result, the projected population of women engineers in Malaysia was 5,844 (26 percent x 22,475 engineers). For the sample size, the numbers are taken from Table Krejcie and Morgan (1970) to obtain the right sample size from the population.

The questionnaire been distributed through online where by email the questionnaire to the company. The measurement of questionnaires for women leadership behaviour, WLB, personality and EI had been adopted from several authors such as Rodriguez (2013), Obiageli et al. (2015), Topolewska et al. (2014) and Singh (2004). The research approach of the study is deductive reasoning where it more from general to specific. It also known as 'top-down' approach (Burney & Saleem, 2008). The deductive started from theory, develop hypothesis, collecting and analysing data and reporting. Therefore, Hypothesis 1, Hypothesis 2, and Hypothesis 3 were developed to study the relationship between WLB, personality, EI and women leadership behaviour among engineers in Malaysia. The hypotheses in this study are as follows: H₁: WLB will be significantly related to women leadership behaviour among the Malaysian engineers; H₂: Personality will be significantly related to women leadership behaviour among the Malaysian engineers; and H₃: EI will be significantly related to women leadership behaviour among the Malaysian engineers.

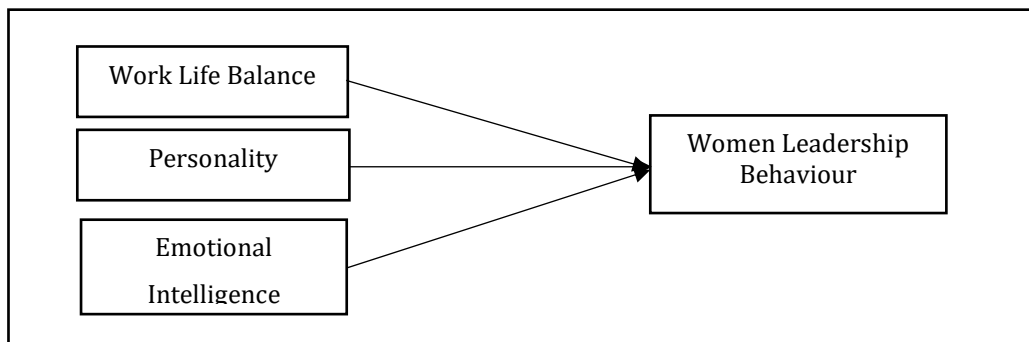


Figure 1. Research Framework

4. RESULTS AND DISCUSSIONS

The profile of respondents is presented in Table 1 based on the demographic factors such as age, marital status, education qualification, working state, monthly income level, years of working and position. Table 2 shows the age range is higher on age 21-30 years old (81.3%) follow by 31-40 years old (10.5%), 41-50 years old (6.1%) and above 51 years old (2%). For marital status, showed that unmarried (65.7%) more compared to other two which are married (31.2%) and others (3.1%). As the education qualification profile, bachelor's degree (83.9%) the highest than other element where the SPM (6.6%), master's degree (5.1%), Others (3.6%) and doctoral degree (0.8%). Thus, for the working state, respondents are more working in Selangor (28.1%) compared to other state. As for the income monthly level most of the respondent get wages about RM 1000-RM 3000 (72.6%). Lastly, years of working showed most of the respondent have been work in range of 1-3 years (49.9%).

Table 1. Demographic Profile of the Respondents (N=391)

Profile	Descriptions	Frequency	Percentage (%)
Age	21-30 years old	318	81.3
	31-40 years old	41	10.5
	41-50 years old	24	6.1
	Above 51 years old	8	2.0
Marital Status	Unmarried	257	65.7
	Married	122	31.2
	Others	12	3.1
Education Qualification	SPM	26	6.6
	Bachelor's degree	328	83.9
	Master's degree	20	5.1
	Doctoral degree	3	0.8
Working State	Others	14	3.6
	Perlis	52	13.3
	Kedah	41	10.5
	Pulau Pinang	20	5.1
	Perak	19	4.9
	Kelantan	-	-
	Terengganu	3	0.8
	Pahang	7	1.8
	Selangor	110	28.1
	Wilayah Persekutuan	34	8.7
	Negeri Sembilan	25	6.4
	Melaka	24	6.1
	Johor	30	7.7
	Sabah	7	1.8
	Sarawak	2	0.5
Others	17	4.3	

Profile	Descriptions	Frequency	Percentage (%)
Monthly Income Level	Below RM 1000	-	-
	RM 1001- RM 3000	284	72.6
	RM 3001- RM 5000	65	16.6
	RM5001- RM 7000	19	4.9
	Above RM 7000	23	5.9
Years of Working	Less than 1 years	97	24.8
	1-3 years	195	49.9
	4-6 years	29	7.4
	More than 6 years	7	17.9
Position	Yes	82	21
	No	309	79

Table 2 shows the Cronbach's Alpha of women leadership behaviour construct. The Cronbach's Alpha value of women leadership behaviour was reported at 0.907, while each of the variables was found to be 0.885, 0.877, and 0.911, respectively. All the construct has pass reliability test for this study. According Taber (2017), Cronbach alpha needs to be more than 0.7 and lower than 0.96. Overall, the findings show that the Cronbach's Alpha fall between 0.877 to 0.911 where all is acceptable.

Table 2. Cronbach's Alpha

Construct	Items	Cronbach's Alpha
Women leadership behavior	14	0.907
Work life balance (WLB)	12	0.885
Personality	12	0.877
Emotional intelligence (EI)	10	0.911

Table 3 shows the Pearson Correlation of women leadership behaviour construct. The Pearson Correlation value of women leadership behaviour was reported at 1.000 while each of the variable was found to be 0.737, 0.724, and 0.735, respectively. Overall, the findings show that the Pearson Correlation value of WLB, personality and EI is positively correlated to women leadership behaviour and significant at the 0.01 level (2-tailed) in this study.

Table 3. Correlations

Construct	Women Leadership Behaviour	WLB	Personality	EI
Pearson Correlation	-	0.737**	0.724**	0.735**
Sig. (2-tailed)		0.000	0.000	0.001
N		391	391	391

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Next, the regression results of WLB, personality and EI on women leadership behaviour using a significance level of 5% and one-tailed test, are summarised in Table 4. The findings from this study show that the relationship between WLB, personality and EI towards women leadership behaviour is positively significant, hence the hypothesis is supported. This implies that there is a significant relationship between WLB, personality and EI towards women leadership behaviour which conclude that these elements have relationship to attract women to become leader. As shown in Table 4, WLB ($\beta=0.312$, $p=.000$), personality ($\beta=0.238$, $p=.000$), and EI ($\beta=0.381$, $p=.000$) were positively related to women leadership behaviour.

Table 4. Testing the Relationship

Relationship	Beta	t-Value	p-Value	Findings
WLB -> WL	0.312	5.889	.000	Supported
P -> WL	0.238	4.407	.000	Supported
EI -> WL	0.318	6.177	.000	Supported

5. CONCLUSIONS

According to the regression analysis, all factors, including the WLB, personality, and EI, are positively related to women leadership behaviour. It can be demonstrated that the factors have a substantially connected influence on women ability to lead. According to the demographic profile, the majority of respondents are between the ages of 21 and 30, are married, and have family responsibilities in addition to their profession. That is to make these things more relevant to women leadership behaviour; they required all of that to become good women leaders and to entice them to be leaders, as there are few women leaders in the world. Women are afraid to hold leadership or higher positions in management because they are afraid that they will not be able to fairly distribute their time as most companies are used to dealing with men in meetings or discussions so they do not have any problem if they need to go home late a little bit but it is different for women who need to be home at specific times to manage their family, cooking, and other work at home. According to the findings of the survey, companies and institutions need to have flexible time management since we are currently dealing with an issue that makes it hard to come to work as normal for the time being, except in a certain sector. It is possible that management will gradually change in order to avoid discrimination and stereotypes against women in technical job. Most of the time, men leaders try to avoid hiring women because they believe women aren't tough enough for the job. According to statistics, the number of women students enrolled in engineering courses is fairly high when compared to males, since they are also interested in industries associated to engineering.

There are several implications from this study as this study's theoretical contribution could be very fruitful to the issues related to women, which were the diversity in leadership, especially in the engineering sector. According to Nor Sham et al. (2021), despite increased women in the labour force participation in Malaysia, the trajectory is quite different in the engineering area. Moreover, it also could contribute to a better understanding of the factors related to women leaders such as WLB, personality, and EI.

WLB was needed for women who were in a higher position. Many women sacrifice their job advancement opportunities if they cannot balance work and other obligations (Guillaume & Pochic, 2009). This study shows the relation between WLB towards women leadership behaviour where it was significant. The value of the study was for researchers, scholars, practitioners, and organisations, including leaders and employees. This study was significant to the practitioners as it emphasises the diversity in the workforce (WLB, personality, and EI) towards women leadership behaviour. By exploring the significant role of knowledge sharing, this study could scientifically convince Human Resource (HR) Specialists to have a diverse workforce, which fairly considers recruiting women as leaders, not just picking men as the leader where women already had the level that they were suitable to be led. HR Specialists also could conduct training on how to increase WLB among the appointed engineer in the companies. Moreover, this study has significant value to the HR Department due to the organisation achieving a high level of creativity by offering a diverse workforce. In other words, the involvement of all women employees that had opportunities to be a leader in the organisation. In addition, this study could increase the number of women in the management team since it had been mentioned that Malaysia needs more human capital in the science and

technology field to achieve the Industrial Revolution 4.0 by the Chairman of the Malaysia Institute for Innovative Nanotechnology (NanoMITe) and Chairman of the Board of Directors of the International Science, Technology and Innovation Center (ISTIC) under UNESCO (Chin, 2017).

There were several limitations of this study. Firstly, the limitation of the study was their lack of previous research that studies women leadership behaviour. Even though studies on leadership were many, studies on women leadership behaviour were very small. Most of the study was about both genders or studies on leadership style. There was a lack of studies that focused only on women engineers, of which women also had many that give a good impact on the industry. In addition, there were difficulties in getting the population as there were no data on women only, but the cumulative number of engineers in Malaysia was from the BEM. It was quite difficult to find the recent article with data on women engineers, but no article was suitable. Other than that, the other limitation which was the biggest problem that occurred was there were difficulties in distributing questionnaires, as there was a restriction on movement where the only way to collect and reach the respondents was by email and contact through social media as more and more companies, were using social media as WhatsApp for communication and not using the office number anymore.

Some suggestions and recommendations could be used for future research to get good and reliable results. Future researchers should study various sectors as many industry types such as aerospace, agriculture produce, beverages, footwear, furniture, and others to make the research more reliable specific to each industry. It was because different industries may have different results. Besides, the study could also be studied in more depth where research includes the dimension for each variable. For example, WLB dimensions were workplace inclusion, family support, employee benefit, time management, co-worker support, and supervisor-subordinate relationship. Studying through dimensions will get more specific reasons or elements that could influence women to be leaders. Lastly, the study could also be a qualitative study where data could be collected through interviews or focus for future researchers. It could get a more accurate and reliable result because face-to-face interviews had been made and could get more explanations from the respondents if any words or sentences were not understood.

REFERENCES

- Abu Bakar, N. R. (2012). Malaysian Women in Management. *Malaysia Journal of Society and Space*, 8(4), 12-20. Retrieved from http://www.ukm.my/geografia/images/upload/2a.geografia-jul%202012-rahamah_ukm-english%20-edited%2030.7.12.pdf
- Asian Development Bank - ADB. (2015). *Women in the Workforce: An Unmet Potential in Asia and Pacific*. Asian Development Bank.
- Ahmed, Z., Asim, M. & Pellitteri, J. (2019). Emotional Intelligence Predicts Academic Achievement In Pakistani Management Students. *The International Journal of Management Education*, 17(2), 286-293. <https://doi.org/10.1016/j.ijme.2019.04.003>
- Baqutayan, S.M.S. (2020). Women Empowerment is Needed to Boost Gender Equality in Malaysia. *Current Research Journal of Social Sciences and Humanities*, 3(1), 96-108. <https://doi.org/10.12944/crjssh.3.1.09>
- Braun, S. & Peus, C. (2018). Crossover of Work-Life Balance Perceptions: Does Authentic Leadership Matter? *Journal of Business Ethics*, 149(4), 875-893. <https://doi.org/10.1007/s10551-016-3078-x>
- Brue, K. (2018). Harmony and Help: Recognizing the Impact of Work-Life Balance for Women Leaders. *Journal of Leadership Education*, 17(4), 219-243. <https://doi.org/10.12806/v17/i4/c2>

- Burney, S. M. A. & Saleem, H. (2008). Inductive and Deductive Research Approach. -. Retrieved https://www.researchgate.net/publication/330350434_Inductive_and_Deductive_Research_Approach
- Chan, S. W., Omar, S. S., R, R., Ahmad, M. F., Zaman, I., & Idrus, N. (2018). Emotional Intelligence and Transformational Leadership Among Managers in Manufacturing Companies. *International Journal of Engineering & Technology*, 7(3.21), 1-4. <https://doi.org/10.14419/ijet.v7i3.21.17083>
- Chin, C. (2017, July 22). Fewer women opt for STEM. *The Star Online*. <https://www.thestar.com.my/news/nation/2017/07/23/fewer-women-opt-for-stem-malaysia-records-low-female-enrolment-in-science-stream/>
- Chin, J.L. (2011, January 1). Women and Leadership: Transforming Visions and Current Contexts. Retrieved from <https://files.eric.ed.gov/fulltext/EJ944204.pdf>
- Chisholm-Burns, M. A., Spivey, C. A., Hagemann, T., & Josephson, M.A. (2017). Women in leadership and the bewildering glass ceiling. *American Journal of Health-System Pharmacy*, 74(5), 312-324. <https://doi.org/10.2146/ajhp160930>
- Eagly, A.H. (2007). Female Leadership Advantage and Disadvantage: Resolving the Contradictions. *Psychology of Women Quarterly*, 31, 1-12. Retrieved from <https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1471-6402.2007.00326.x>
- Erhardt, N.L., Werbel, J.D. & Shrader, C.B. (2003). Board of Director Diversity and Firm Financial Performance. *Corporate Governance*, 11(2), 102-111. <https://doi.org/10.1111/1467-8683.00011>
- Fui, B. & Lim, Y. (2019). Malaysia Women Left Behind? Closing the Gender Gap in Malaysia. *Japan Labour Issues*, 3(17), 22-29. Retrieved from <https://www.jil.go.jp/english/jli/documents/2019/017-03.pdf>
- Gabdreeva, G.Sh. & Khalfieva, A.R. (2016). The Features of Female Managers' Personality Traits in Organisation. *International Journal of Environmental and Science Education*, 11(6), 1195-1203. Retrieved from http://www.ijese.net/makale_indir/IJESE_243_article_573c5724ec058.pdf
- Gipson, A.N., Pfaff, D.L., Mendelsohn, D.B., Catenacci, L. T., & Burke, W.W. (2017). Women and Leadership. *The Journal of Applied Behavioural Science*, 53(1), 32-65. <https://doi.org/10.1177/0021886316687247>
- Grzywacz, J. & Carlson, D. (2007). Conceptualizing Work-Family Balance: Implications for Practice and Research. *Advances in Developing Human Resources*, 9(4), 45-471. Retrieved from <http://adh.sagepub.com/content/9/4/455.full.pdf>
- Guillaume, C., & Pochic, S. (2009). What Would You Sacrifice? Access to Top Management and the Work-life Balance. *Gender, Work & Organisation*, 16(1), 14-36. <https://doi.org/10.1111/j.1468-0432.2007.00354.x>
- Hamdan, Hanim & Saraih, Ummi Naiemah (2021). Determinants of Women Leadership in the Malaysian Manufacturing Industry, *AIP Conference Proceedings* 2339, 020146 (2021); <https://doi.org/10.1063/5.0044183>
- Kalysh, K., Kulik, C.T. & Perera, S. (2016). Help or Hindrance? Work-Life Practices and Women in Management. *The Leadership Quarterly*, 27(3), 504-518. <https://doi.org/10.1016/j.leaqua.2015.12.009>
- Khazanah Research Institute. (2018). The Malaysian Workforce. In the Malaysian Workforce (Vol. Part 2, pp. 76-134). Retrieved from http://www.krinstitute.org/assets/contentMS/img/template/editor/20181129_Part%202_KRI_SOH_2018.pdf
- Krejcie, R.V. & Morgan, D.W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*, 30, 607-610. Retrieved from https://home.kku.ac.th/sompong/guest_speaker/KrejcieandMorgan_article.pdf
- Krishnan, H. A. & Park, D. (2005). A Few Good Women—On Top Management Teams. *Journal of Business Research*, 58(12), 1712-1720. <https://doi.org/10.1016/j.jbusres.2004.09.003>

- Larsen, R. J. & Buss, D.M. (2009). *Personality Psychology* (4th ed.). New York, United States: McGraw-Hill Education.
- Li, W. D., Li, S., Feng, J. J., Wang, M., Zhang, H., Frese, M., & Wu, C. H. (2020). Can Becoming A Leader Change Your Personality? An Investigation with Two Longitudinal Studies from A Role-Based Perspective. *Journal of Applied Psychology*. Published. <https://doi.org/10.1037/apl0000808>
- Minárová, M., Malá, D. & Smutný, F. (2020). Emotional Intelligence of Managers in Family Businesses in Slovakia. *Administrative Sciences*, 10(4), 1-15. <https://doi.org/10.3390/admsci10040084>
- Nor Sham, N. I. S., Salleh, R., & Syed Sheikh, S. S. (2021). Women Empowerment and Work-Life Balance of Women Engineers in the Malaysian Energy Sector: A Conceptual Framework. *SHS Web of Conferences*, 124, 1-8. <https://doi.org/10.1051/shsconf/202112408009>
- Obiageli, O.L., Uzochukwu, O. C. & Ngozi, C. D. (2015). Work Life Balance and Employee Performance in Selected Commercial Banks in Lagos State. *European Journal of Research and Reflection in Management Sciences*, 3(4), 63-77. Retrieved from https://www.researchgate.net/publication/283350144_Work_Life_Balance_And_Employee_Performance_In_Selected_Commercial_Banks_In_Lagos_State
- Rodriguez, R. (2013). Leadership Behaviour Description Questionnaire (LBDQ & LBDQ-XII). *Online Instruments, Data Collection, and Electronic Measurements*, 97-117. <https://doi.org/10.4018/978-1-4666-2172-5.ch006>
- Saini, S. (2018). Emotional Intelligence at Workplace - A Conceptual Study. *International Journal of Management Studies*, V (3(5)), 53. [https://doi.org/10.18843/ijms/v5i3\(5\)/08](https://doi.org/10.18843/ijms/v5i3(5)/08)
- Sidhu, A. K., & Saluja, R. (2017). Are Working Women Able to Manage their Work Life Balance? A Study of Bank and Insurance Companies' Professionals of Punjab. *Journal of General Management Research*, 4(2), 1-15. Retrieved from <https://www.scmsnoida.ac.in/assets/pdf/journal/vol4issue2/01%20Aman%20sidhu.pdf>
- Singh, S. (2004). Development of a Measure of Emotional Intelligence. *Psychological Studies*, 49,136-141.Retrievedfrom https://www.researchgate.net/publication/258293398_Development_of_a_Measure_of_Emotional_Intelligence
- Sun, P., & Shang, S. (2019). Personality Traits and Personal Values of Servant Leaders. *Leadership & Organisation Development Journal*, 40(2), 177-192. <https://doi.org/10.1108/lodj-11-2018-0406>
- Taber, K.S. (2017). The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education. *Research in Science Education*, 48(6), 1273-1296. <https://doi.org/10.1007/s11165-016-9602-2>
- The Institution of Engineers Malaysia. (2020, June). IEM Annual Report (No. 2020). <https://www.myiem.org.my/news/newsdetails.aspx?id=613>
- The Stars. (2018, August 15). Empowering women to pursue engineering. *The Star Online*. <https://www.thestar.com.my/news/education/2018/08/15/empowering-women-to-pursue-engineering/>
- Topolewska, E., Skimina, E., Strus, W., Ciecuch, J., & Rowinski, T. (2014). The short IPIP-BFM-20 questionnaire for measuring the big five. *Annals of Psychology*, 17(2), 385-402. https://www.researchgate.net/publication/285203927_The_short_IPIP-BFM-20_questionnaire_for_measuring_the_big_five
- UNESCO. (2021). *Engineering for Sustainable Development*. United Nations Education, Scientific & Cultural Organisation.
- United Nations. (2015). *Sustainable Development Goals: Sustainable Development Knowledge Platform*. Sustainable Development. <https://sustainabledevelopment.un.org/?menu=1300>
- United Nations. (2020). *Goal 5 | Department of Economic and Social Affairs*. Department of Economic and Social Affairs. <https://sdgs.un.org/goals/goal5>